

Note Proposed Amendments: (added text to the code is: underlined, deleted text to the code is: ~~struck through~~)

#	SECTION	SUMMARY	PROPONENT	ACT.*
1)	2015 IECC C202	<p>The Southeast Energy Efficiency Alliance (SEEA), Southern Environmental Law Center (SELC), and Southface Energy Institute propose the following edit to the definition of “On-Site Renewable Energy” contained in Section C202 of the 2015 International Energy Conservation Code (IECC):</p> <p><b>Revise Section 202 General Definition.</b></p> <p><b>ON-SITE RENEWABLE ENERGY.</b> <u>Energy systems that are located on the building site, are installed on the building’s side of the utility service provider’s meter, produce energy primarily intended for use in the building and not solely for export to utilities, and produce energy derived from any of the following sources: solar radiation, wind, waves, tides, landfill gas, biomass or the internal heat of the earth. Energy systems that derive energy from solar radiation shall be modeled in the orientation of the energy system.</u></p> <p>This commentary only pertains to energy systems that derive energy from solar radiation and are owned by a third-party. The Georgia Solar Power Free-Market Financing Act of 2015 (commonly referred to as “HB 57”) allows a customer to purchase solar electricity generated by a solar system owned by a third-party so long as certain criteria are met. Two key criteria are that the law only authorizes solar systems that generate electricity fueled by sunlight and that the solar system must be installed on property owned or occupied by the entity purchasing the system’s electricity. The definition of “property” extends to all adjacent contiguous tracts of land utilized by the entity purchasing the solar system’s electricity. “Building Site” in C202 and R202 is defined as a contiguous area of land that is under the ownership or control of one entity. While this definition of “building site” is similar to HB 57’s definition of “property,” the key difference is that HB 57 focuses on the entity purchasing the solar system’s electricity. When modeling a solar system that is owned by a third-party, it is best to refer to HB 57 to determine whether all criteria have been met.</p>	Shan Arora, Southface	R
2)	2015 IECC C402.5, ASHRAE 90.1: 5.4.3	<p>Proposed Amendment to require Light Commercial Building Blower Door Testing</p> <p>- (Amend IECC C402.5 and add to ASHRAE 90.1-2013 5.4.3)</p> <p>Regardless of which commercial code is used to demonstrate compliance, air leakage testing shall be required for all mid-rise Multifamily housing units containing up to six stories of residential units.</p> <p>Testing shall follow all the same requirements as low-rise Multifamily (3-stories and under)</p>	Mike Barcik, Southface Representing (GEFA)	No Action in Lieu of Item 39
3)	2015 IECC C402.5, ASHRAE 90.1: 5.4.3	<p>Proposed Amendment to require Light Commercial Building Blower Door Testing</p> <p>- (Amend IECC C402.5 and add to ASHRAE 90.1-2013)</p> <p>Regardless of which commercial code is used to demonstrate compliance, air leakage testing shall be required for all new, conditioned (both heated and cooled) commercial buildings &lt; 5,000 s.f.</p> <p>Test results must demonstrate air tightness with an Envelope Leakage Ratio (ELR<sub>75</sub>) &lt; 0.5 where,</p> $ELR_{75} = CFM_{75} / \text{square footage of building shell area}$ <p>CFM of Leakage at 75 Pa (0.3 inches of w.c.) may be measured directly or extrapolated from leakage measured with a blower door at 50 Pa. For conversion purposes, <math>CFM_{75} = CFM_{50} \times 1.30</math></p> <p><b>Exceptions:</b></p> <p>warehouses and storage spaces that are not fully conditioned (both heated and cooled) and buildings with <i>commercial kitchen hoods</i></p> <p><b>Example 1.</b> A one-story building measures 50 x 100 (5,000 s.f.) with 12’ ceilings. The building shell area is the floors, walls and ceilings that make up the thermal envelope.</p> <p>In this example,</p>	Mike Barcik, Southface Representing (GEFA)	D

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		<ul style="list-style-type: none"> <li>the building envelope (footprint) floor is 50x100 = 5,000 s.f.</li> <li>the top level ceiling is 50x100 = 5,000 s.f.</li> <li>the walls are 300' x 12' = 3,600 s.f.</li> <li>The total shell area is 13,600 s.f.</li> </ul> <p>In order for the measured ELR<sub>75</sub> to pass, the leakage must be less than 6,800 CFM<sub>75</sub>.  <math>ELR_{75} = CFM_{75} / \text{square footage of building shell area} = 6,799 / 13,600 &lt; 0.5</math></p> <p><b>Example 2.</b> A two-story building with 12' ceilings measures 50 x 40 on each level (2,000 s.f. each floor, 4,000 s.f. total). The building shell area is the floors, walls (including the band between the first and second floors) and ceilings that make up the thermal envelope.  In this example,</p> <ul style="list-style-type: none"> <li>the building envelope (footprint) floor is 50x40 = 2,000 s.f.</li> <li>the top level ceiling is 50x40 = 2,000 s.f.</li> <li>the walls are (50' + 40' + 50' + 40') x (12' + 1' + 12') = 4,500 s.f.</li> <li>The total shell area is 8,500 s.f.</li> </ul> <p>In order for the measured ELR<sub>75</sub> to pass, the leakage must be less than 4,250 CFM<sub>75</sub>.  <math>ELR_{75} = CFM_{75} / \text{square footage of building shell area} = 4,249 / 8,500 &lt; 0.5</math></p>		
4)	2015 IECC C402.5.3	<p><b>Delete Section C402.5.3 Rooms containing fuel-burning appliances without substitution:</b>  <del>C402.5.3 Rooms containing fuel-burning appliances. In <i>Climate Zones 3 through 8</i>, where open combustion air ducts provide combustion air to open combustion space conditioning fuel burning appliances, the appliances and combustion air openings shall be located outside of the <i>building thermal envelope</i> or enclosed in a room isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table C402.1.3 or C402.1.4, where the walls, floors and ceilings shall meet the minimum of the below grade wall R-value requirement. The door into the room shall be fully gasketed, and any water lines and ducts in the room insulated in accordance with Section C403. The combustion air duct shall be insulated, where it passes through conditioned space, to a minimum of R-8.</del></p> <p><b>Exceptions:</b>  <del>1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.  2. Fireplaces and stoves complying with Sections 901 through 905 of the <i>International Mechanical Code</i>, and Section 2111.13 of the <i>International Building Code</i>.</del></p>	Andrea Papageorge, Southern Company Gas	D
5)	2015 IECC C403.2.8	Removal of <del>Section C403.2.8 titled "Kitchen Exhaust Systems"</del> , including its corresponding <del>Table C403.2.8</del> , in its entirety.	Barry Dameron, Cobb School Distr.	A
6)	2015 IECC C403.2.8	Removal of <del>Section C403.2.8 titled "Kitchen Exhaust Systems"</del> , including its corresponding <del>Table C403.2.8</del> , in its entirety.	Barry Spurlock, Spurlock Associates	See #5
7)	2015 IECC C403.2.8	Removal of <del>Section C403.2.8 titled "Kitchen Exhaust Systems"</del> , including its corresponding <del>Table C403.2.8</del> , in its entirety.	Brian Griffin, Quality Air, Inc.	See #5
8)	2015 IECC C403.2.8	Removal of <del>Section C403.2.8 titled "Kitchen Exhaust Systems"</del> , including its corresponding <del>Table C403.2.8</del> , in its entirety.	Bruce Stuart, Rockdale County Public Schools	See #5
9)	2015 IECC C403.2.8	Removal of <del>Section C403.2.8 titled "Kitchen Exhaust Systems"</del> , including its corresponding <del>Table C403.2.8</del> , in its entirety.	Doug Roland, Cobb School Dist.	See #5
10)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Dennis Bledsoe, Clayton Schools Dist.	See #5

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11)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8 in its entirety.	Edward Buhler, Southern A & E	See #5
12)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Gregg Cox, Matheson Ball & Asso.	See #5
13)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Jack Gardner, Douglas County School System	See #5
14)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	James Griffin, Quality Air, Inc.	See #5
15)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	James Matheson, Matheson Ball & Asso.	See #5
16)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Joe Perno, Barrow County Schools	See #5
17)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Josh Patton, Jackson County School	See #5
18)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Kenneth Elsberry, Paulding School Dist.	See #5
19)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its Table C403.2.8, in its entirety.	Michael Kicher, Matheson-Ball & Assoc.	See #5
20)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its Table C403.2.8, in its entirety.	Michael Waldbillig, Southern A&E	See #5
21)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Mike Dillon, Spurlock & Assoc.	See #5
22)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Pankaj Daiya, Bartow School Syst.	See #5
23)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Phil Parrott, Cherokee School Distr.	See #5
24)	2015 IECC C403.2.8	Remove the entire code section "C403.2.8 Kitchen Exhaust Systems" from the 2015 International Energy Conservation Code and the corresponding table "Table C403.2.8 Maximum Net Exhaust Flow Rate, CFM per Linear Foot of Hood Length."	Robert Scott Brown, Matheson-Ball & Assoc.	See #5
25)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Scott Buchberger, Robertson Loia Roof	See #5
26)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Scott Burgess, Oconee County Schools	See #5
27)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Tim Fisher, Gwinnett County Schools	See #5
28)	2015 IECC C403.2.8	Removal of Section C403.2.8 titled "Kitchen Exhaust Systems", including its corresponding Table C403.2.8, in its entirety.	Tim Williams, Rome County Schools	See #5

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29)	2015 IECC C407.3 and C407.4.2	<p><b>C407.3 Performance-based compliance.</b> Compliance based on total building performance requires that a proposed building (<i>proposed design</i>) be shown to have an annual energy cost that is less than or equal to the annual energy cost of the <i>standard reference design</i>. Energy prices shall be taken from a source <i>approved</i> by the <i>code official</i>, such as the Department of Energy, Energy Information Administration's <i>State Energy Price and Expenditure Report</i>. <i>Code officials</i> shall be permitted to require time-of-use pricing in energy cost calculations. <del>Nondepletable energy collected off site shall be treated and priced the same as purchased energy. Energy from nondepletable energy sources collected on site shall be omitted from the annual the reduction in energy cost of the proposed design.</del> The reduction in annual energy cost of the <i>proposed design</i> associated with <i>on-site renewable energy</i> shall be not more than 5% of the total annual energy cost. The amount of renewable energy purchased from off-site sources shall be the same in the <i>standard reference design</i> and the <i>proposed design</i>.</p> <p><b>Exception:</b> Jurisdictions that require site energy (1 kWh = 3413 Btu) rather than energy cost as the metric of comparison.</p> <p><b>C407.4.2 Additional documentation.</b> The <i>code official</i> shall be permitted to require the following documents:</p> <ol style="list-style-type: none"> <li>1. Documentation of the building component characteristics of the <i>standard reference design</i>.</li> <li>2. Thermal zoning diagrams consisting of floor plans showing the thermal zoning scheme for <i>standard reference design</i> and <i>proposed design</i>.</li> <li>3. Input and output reports from the energy analysis simulation program containing the complete input and output files, as applicable. The output file shall include energy use totals and energy use by energy source and end-use served, total hours that space conditioning loads are not met and any errors or warning messages generated by the simulation tool as applicable.</li> <li>4. An explanation of any error or warning messages appearing in the simulation tool output.</li> <li>5. A certification signed by the builder providing the building component characteristics of the <i>proposed design</i> as given in Table C407.5.1(1).</li> <li>6. Documentation of the reduction in annual energy use associated with on-site renewable energy.</li> </ol>	Eric Lacey, RECA	R
30)	2015 IECC Table C407.5.1(1)	<p><b>Revise Table C407.5.1(1)</b></p> <p>Incorporate the following approved 2015 IECC code change as of the end of the 2016 ICC Group B Public Comment Hearings: CE 259-16 Part I (Commercial provisions) The remainder of the table is unchanged.</p>	Roger LeBrun, (VELUX America LLC)	D
31)	2015 IECC R202	<p>The Southeast Energy Efficiency Alliance (SEEA), Southern Environmental Law Center (SELC), and Southface Energy Institute propose the following edit to the definition of “On-Site Renewable Energy” contained in Section C202 of the 2015 International Energy Conservation Code (IECC):</p> <p><b>Revise Section 202 General Definition.</b></p> <p><b>ON-SITE RENEWABLE ENERGY.</b> Energy systems that are located on the building site, are installed on the building’s side of the utility service provider’s meter, produce energy primarily intended for use in the building and not solely for export to utilities, and produce energy derived from any of the following sources: solar radiation, wind, waves, tides, landfill gas, biomass or the internal heat of the earth. <u>Energy systems that derive energy from solar radiation shall be modeled in the orientation of the energy system.</u></p> <p>This commentary only pertains to energy systems that derive energy from solar radiation and are owned by a third-party. The Georgia Solar Power Free-Market Financing Act of 2015 (commonly referred to as “HB 57”) allows a customer to purchase solar electricity generated by a solar system owned by a third-party so long as certain criteria are met. Two key criteria are that the law only authorizes solar systems that generate electricity fueled by sunlight and that the solar system must be installed on property owned or occupied by the entity purchasing the system’s electricity. The definition of “property” extends to all adjacent contiguous tracts of land utilized by the entity purchasing the solar system’s electricity. “Building Site” in C202 and R202 is defined as a contiguous area of land that is under the ownership or control</p>	Shan Arora, Southface	R

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32)	2015 IECC R401.2	<b>Revise Section R401.2 as follows:</b> <b>R401.2 Compliance.</b> Projects shall comply with <u>all provisions of Chapter 4 labeled “Mandatory”</u> and one of the following: 1. Sections R401 through R404. 2. Section R405, <del>and the provisions of Sections R401 through R404 labeled “Mandatory.”</del> 3. <del>An energy rating index (ERI) approach</del> in Section R406. 4. The most recent version of REScheck, keyed to the 2015 IECC.	Eric Lacey, RECA	A																																																																				
33)	2015 IECC R401.2.1	<b>Delete Section R401.2.1 and replace with the following:</b> <b>R401.2.1 (Mandatory) –</b> Where trade-offs are used, the minimum R-values, maximum U-factors, and maximum SHGCs for thermal envelope components in projects complying under this code (including the use of REScheck) shall be according to <u>Table R401.2.1</u>  <b>Table R401.2.1</b> <b>MINIMUM R-VALUES AND MAXIMUM U-FACTORS AND SHGC</b> <b>FOR ENVELOPE COMPONENTS WHEN TRADE-OFFS ARE USED</b> <table><tr><th>CLIMATE ZONE</th><th>FENES-TRATION U-FACTOR</th><th>SKYLIGHT U-FACTOR</th><th>FENES-TRATION SHGC</th><th>CEILING R-VALUE</th><th>WOOD FRAME WALL R-VALUE</th><th>ATTIC KNEE WALL R-VALUE</th><th>MASS WALL R-VALUE</th><th>FLOOR R-VALUE</th><th>BASEMENT WALL R-VALUE</th><th>SLAB R-VALUE &amp; DEPTH</th><th>CRAWL SPACE WALL R-VALUE</th><th>ROOFLINE INSULATION R-VALUE<sup>a</sup></th></tr><tr><td>2</td><td>0.50</td><td>0.75</td><td>0.30</td><td>30</td><td>13</td><td>18</td><td>4/6</td><td>13</td><td>0</td><td>0</td><td>0</td><td>21</td></tr><tr><td>3</td><td>0.50</td><td>0.65</td><td>0.30</td><td>30</td><td>13</td><td>18</td><td>5/8</td><td>19</td><td>5/13</td><td>0</td><td>5/13</td><td>21</td></tr><tr><td>4</td><td>0.35</td><td>0.60</td><td>0.30</td><td>38</td><td>13</td><td>18</td><td>5/10</td><td>19</td><td>10/13</td><td>10, 2ft</td><td>10/13</td><td>21</td></tr></table> <p>a. <u>Unvented attic assemblies shall comply with IRC Section R806.5.</u></p>	CLIMATE ZONE	FENES-TRATION U-FACTOR	SKYLIGHT U-FACTOR	FENES-TRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	ATTIC KNEE WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE	ROOFLINE INSULATION R-VALUE <sup>a</sup>	2	0.50	0.75	0.30	30	13	18	4/6	13	0	0	0	21	3	0.50	0.65	0.30	30	13	18	5/8	19	5/13	0	5/13	21	4	0.35	0.60	0.30	38	13	18	5/10	19	10/13	10, 2ft	10/13	21	Eric Lacey, RECA	No Action in Lieu of Item 70																
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34)	2015 IECC Tables R402.1.2 and R402.1.4	<b>Revise Tables R402.1.2 and R402.1.4 as follows:</b>  <b>TABLE R402.1.2</b> <b>INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT</b> <table><tr><th>CLIMATE ZONE</th><th>CEILING R-VALUE</th><th>WOOD FRAME WALL R-VALUE</th><th>ATTIC KNEE WALL R-VALUE</th><th>MASS WALL R-VALUE</th><th>FLOOR R-VALUE</th><th>BASEMENT WALL R-VALUE</th><th>SLAB R-VALUE &amp; DEPTH</th><th>CRAWL SPACE WALL R-VALUE</th></tr><tr><td>2</td><td>38</td><td>13</td><td>18</td><td>4/6</td><td>13</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3</td><td>38</td><td>20 or 13+5</td><td>20 or 13+5</td><td>8/13</td><td>19</td><td>5/13</td><td>0</td><td>5/13</td></tr><tr><td>4</td><td>49</td><td>20 or 13+5</td><td>20 or 13+5</td><td>8/13</td><td>19</td><td>10/13</td><td>10, 2ft</td><td>10/13</td></tr></table> <b>TABLE R402.1.4</b> <b>EQUIVALENT U-FACTORS</b> <table><tr><th>Climate Zone</th><th>CEILING U-FACTOR</th><th>FRAME WALL U-FACTOR</th><th>ATTIC KNEE WALL U-FACTOR</th><th>MASS WALL U-FACTOR</th><th>FLOOR WALL U-FACTOR</th><th>BASEMENT WALL U-FACTOR</th><th>CRAWL SPACE WALL U-FACTOR</th></tr><tr><td>2</td><td>0.030</td><td>0.084</td><td>0.065</td><td>0.165</td><td>0.064</td><td>0.360</td><td>0.477</td></tr><tr><td>3</td><td>0.030</td><td>0.060</td><td>0.060</td><td>0.098</td><td>0.047</td><td>0.091</td><td>0.136</td></tr><tr><td>4</td><td>0.026</td><td>0.060</td><td>0.060</td><td>0.098</td><td>0.047</td><td>0.059</td><td>0.065</td></tr></table>	CLIMATE ZONE	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	ATTIC KNEE WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE	2	38	13	18	4/6	13	0	0	0	3	38	20 or 13+5	20 or 13+5	8/13	19	5/13	0	5/13	4	49	20 or 13+5	20 or 13+5	8/13	19	10/13	10, 2ft	10/13	Climate Zone	CEILING U-FACTOR	FRAME WALL U-FACTOR	ATTIC KNEE WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR WALL U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR	2	0.030	0.084	0.065	0.165	0.064	0.360	0.477	3	0.030	0.060	0.060	0.098	0.047	0.091	0.136	4	0.026	0.060	0.060	0.098	0.047	0.059	0.065	Eric Lacey, RECA	No Action in Lieu of Item 57
CLIMATE ZONE	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	ATTIC KNEE WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE																																																																
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35)	2015 IECC Tables R402.1.2 and 402.1.4	<p>Revise Tables R402.1.2 and R402.1.4 to read as follows:</p> <p><b>TABLE R402.1.2</b> <b>INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT</b></p> <table><tr><th>CLIMATE ZONE</th><th>FENESTRATION U-FACTOR</th><th>SKYLIGHT U-FACTOR</th><th>GLAZED FENESTRATION SHGC</th></tr><tr><td>2</td><td><del>0.40</del> <u>0.35</u></td><td><del>0.65</del> <u>0.55</u></td><td>0.25</td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td>0.25</td></tr><tr><td>4</td><td>0.35</td><td>0.55</td><td><del>0.40</del> <u>0.25</u></td></tr></table> <p><b>TABLE R402.1.4</b> <b>EQUIVALENT U-FACTORS</b></p> <table><tr><th>CLIMATE ZONE</th><th>FENESTRATION U-FACTOR</th><th>SKYLIGHT U-FACTOR</th><th>GLAZED FENESTRATION SHGC</th></tr><tr><td>2</td><td><del>0.40</del> <u>0.35</u></td><td><del>0.65</del> <u>0.55</u></td><td><u>0.25</u></td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td><u>0.25</u></td></tr><tr><td>4</td><td>0.35</td><td>0.55</td><td><u>0.25</u></td></tr></table>	CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	2	<del>0.40</del> <u>0.35</u>	<del>0.65</del> <u>0.55</u>	0.25	3	0.35	0.55	0.25	4	0.35	0.55	<del>0.40</del> <u>0.25</u>	CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	2	<del>0.40</del> <u>0.35</u>	<del>0.65</del> <u>0.55</u>	<u>0.25</u>	3	0.35	0.55	<u>0.25</u>	4	0.35	0.55	<u>0.25</u>	Eric Lacey, RECA	No Action in Lieu of Item 57																																																																					
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37)	2015 IECC R402.2.1	<p>Revise Section 402.2.1 Ceilings with attic spaces to read as follows:</p> <p><b>R402.2.1 Ceilings with attic spaces.</b> Where Section R402.1.2 would require R-38 insulation in the ceiling, installing R-30 over 100 percent of the ceiling area requiring insulation shall be deemed to satisfy the requirement for R-38 wherever the full height of uncompressed R-30 insulation extends completely over the wall top plate at the eaves. Similarly, where Section R402.1.2 would require R-49 insulation in the ceiling, installing R-38 over 100 percent of the ceiling area requiring insulation shall be deemed to satisfy the requirement for R-49 insulation wherever the full height of uncompressed R-38</p>	Randy Nicklas, ICYNENE, Inc.	R																																																																																																					



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		<p><del>insulation extends over the wall top plate at the eaves.</del> This reduction shall not apply to the U-factor alternative approach in Section R402.1.4 and the total UA alternative in Section R402.1.5.</p> <p>For HVAC attic platforms used for locating and servicing equipment, R-19 (maximum U-0.047) shall be deemed to meet the requirements of R-38 (maximum U-0.027) in the ceiling. R-19 is deemed acceptable for up to 32 square feet of attic decking per HVAC system. R-19 shall be deemed acceptable for a maximum 32 inch wide passage to the HVAC system as referenced under M1305.1.3 of the International Residential Code.</p>		
38)	2015 IECC R402.2.14	<p><b>Add a new Section 402.2.14 to read as follows:</b></p> <p><b>Insulation Installation Details</b></p> <p><b>Wall and ceiling</b> insulation that makes up portions of the building thermal envelope in GA residences shall be installed to Passing Grade quality.</p> <p>Two criteria affect installed insulation grading: <b>voids/ gaps</b> (in which no insulation is present in a portion of the overall insulated surface) and <b>compression/incomplete fill</b> (in which the insulation does not fully fill out or extend to the desired depth).</p> <p><u>Voids/Gaps</u></p> <ul style="list-style-type: none"> <li>○ Voids or gaps in the insulation are only occasional and very small for Passing Grade (&lt; 1% of overall component surface area)</li> </ul> <p><u>Compression/Incomplete Fill</u></p> <ul style="list-style-type: none"> <li>○ Compression/Incomplete Fill for both <i>air permeable insulation</i> (e.g., fiberglass, cellulose) and <i>air impermeable insulation</i> (e.g., spray polyurethane foam) must be less than 1 inch in depth or less than 20% of the intended depth, whichever is more stringent. The allowable area of compression/incomplete fill must be less than 5% of the overall insulated surface to achieve a Passing Grade.</li> <li>○ Any compression/incomplete fill with a <b>depth</b> greater than the above specifications (up to 1" or 20% of the intended depth, whichever is more stringent) shall not achieve a Passing Grade.</li> </ul> <p><u>Additional Wall Insulation Requirements</u></p> <ul style="list-style-type: none"> <li>○ All vertical air permeable insulation shall be installed in substantial contact with an air barrier on all six (6) sides. <u>Exception:</u> Unfinished basements and fireplaces (insulation shall be restrained to stay in place). For unfinished s, air permeable insulation and associated framing in a framed cavity wall shall be installed less than ¼" from the basement wall surface.</li> <li>○ Attic kneewall details – Attic kneewalls shall be insulated to a total R-value of at least R-18 through any combination of cavity and continuous insulation. Air permeable insulation shall be installed with a fully sealed attic-side air barrier (e.g., OSB with seams caulked, rigid insulation with joints taped, etc.). Attic kneewalls with air impermeable insulation shall not require an additional attic-side air barrier.</li> </ul> <p><b>Underfloor insulation</b> that makes up portions of the building thermal envelope in GA residences shall be installed to Passing Grade quality.</p> <p>Two criteria affect installed insulation grading: <b>voids/ gaps</b> (in which no insulation is present in a portion of the overall insulated surface) and <b>compression/incomplete fill</b> (in which the insulation does not fully fill out or extend to the desired depth).</p> <p><u>Voids/Gaps</u></p> <ul style="list-style-type: none"> <li>○ Voids or gaps in the insulation are minimal for Passing Grade (&lt; 2% of overall component surface area)</li> </ul> <p><u>Compression/Incomplete Fill</u></p> <ul style="list-style-type: none"> <li>○ Compression/Incomplete Fill for both <i>air permeable insulation</i> (e.g., fiberglass, cellulose) and <i>air impermeable insulation</i> (e.g., spray polyurethane foam) must be less than 1 inch in depth or less than 20% of the intended</li> </ul>	Abe Kruger, SK Collaborative	D

#	SECTION	SUMMARY	PROPONENT	ACT.*
		<p>depth, whichever is more stringent. The allowable area of compression/incomplete fill must be less than 10% of the overall insulated surface to achieve a Passing Grade.</p> <p>Any compression/incomplete fill with a <b>depth</b> greater than the above specifications (up to 1" or 20% of the intended depth, whichever is more stringent) shall not achieve a Passing Grade.</p>		
39)	2015 IECC R402.4.1.3	<p>Add a new Section 402.4.1.3 Low-rise R-2 multifamily testing. <u>Low-rise R2 multifamily dwellings shall be tested to less than 7 air changes per hour at 50 Pascals (ACH50).</u></p> <p><u>As an alternative to ACH50, compliance for Low-rise R2 dwellings may be attained by achieving an Envelope Leakage Ratio at 50 Pascals (ELR50) of less than 0.35 (ELR50 &lt; 0.35, where ELR50 = CFM50 / Envelope Shell Area, in square feet).</u></p> <p><b>Add a new Section 402.4.1.3.1 Low-rise multifamily testing protocol.</b> (Optional) <u>Where a residential building is classified as R2, envelope testing may (optionally) employ either or both of the following testing protocols:</u></p> <ol style="list-style-type: none"> <li><u>Utilize multiple fans in adjacent units (commonly referred to as Guarded Blower Door testing) to minimize effect of leakage to adjacent units (not required).</u></li> <li><u>Envelope testing of less than 100 percent shall be acceptable assuming a maximum sampling protocol of 1 in 4 units per floor (if sampled unit passes, the remaining up to three units are deemed to comply; if sampled unit fails, it must be sealed and retested and the remaining up to three units shall also be tested).</u></li> </ol>	David Goulding, Ensign Building Solutions; Mike Barcik, Southface, Representing (GEFA)	R
40)	2015 IECC R402.4.4	<p><b>Delete Section R402.4.4 without substitution:</b> R402.4.4 Rooms containing fuel-burning appliances. In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel-burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> <li><del>Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.</del></li> <li><del>Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the <i>International Residential Code</i>.</del></li> </ol>	Andrea Papageorge, Southern Company Gas	D
41)	2015 IECC R403.3	<p><b>R403.3 (N1102.3) Ducts.</b> Ducts and air handlers shall be <u>installed</u> in accordance with Sections R403.3.1 through R403.3.5 R403.3.7. <b>New Text:</b> <b>R403.3.6 Ducts buried within ceiling insulation.</b> <u>Where supply and return air ducts are partially or completely buried in ceiling insulation, such ducts shall comply with all of the following:</u></p> <ol style="list-style-type: none"> <li><u>The supply and return ducts have insulation of an R-value not less than of R-8.</u></li> <li><u>At all points along each duct, the sum of the ceiling insulation R-values against and above the top of the duct, and against and below the bottom of the duct is not less than R-19, excluding the R-value of the duct insulation. In climate zones 1A, 2A and 3A, the supply ducts which are completely buried within ceiling insulation, are insulated to an R-value of not less than R-13 and are in compliance with the vapor retarder requirements of Section 604.11 of the <i>International Mechanical Code</i> or Section M1601.4.6 or the <i>International Residential Code</i>, as applicable.</u></li> </ol> <p><b>Exception:</b> Sections of the supply duct that are less than 3 feet from the supply outlet shall not be required to comply with these requirements.</p>	Charles Cottrell, North American Insulation Manufacturers Association (NAIMA)	D



#	SECTION	SUMMARY	PROPONENT	ACT.*
	2015 IECC R403.3	<p><b><u>R403.3.6.1 Deeply buried duct effective R-value.</u></b> Sections of ducts installed in accordance with Section R403.3.6 and directly on or within 5.5 inches of the ceiling board and surrounded with blown attic insulation of R-30 or greater and the top of the duct is buried a minimum of 3.5 inches below the insulation shall be permitted to claim an effective duct insulation of R-25 for the deeply buried section of the duct when using a simulated energy performance analysis.</p> <p><b><u>R403.3.7 Ducts located in conditioned space.</u></b> For ducts to be considered as inside a conditioned space, the ducts shall comply with either of the following:</p> <ol style="list-style-type: none"> <li><u>1. The duct system is located completely within the continuous air barrier and within the building thermal envelope.</u></li> <li><u>2. The ducts are buried within ceiling insulation in accordance with Section R403.3.6 and all of the following conditions exist:</u> <ol style="list-style-type: none"> <li><u>2.1 The air handler is located completely within the continuous air barrier and within the building thermal envelope.</u></li> <li><u>2.2 The duct leakage, as measured either by a rough-in test of the ducts or a post-construction total system leakage test to outside the building thermal envelope in accordance with Section R403.3.4, is less than or equal to 1.5 cubic feet per minute (42.5 L/min) per 100 square feet (9.29 m<sup>2</sup>) of conditioned floor area served by the duct system.</u></li> <li><u>2.3 The ceiling insulation R-value installed against and above the insulated duct is greater than or equal to the proposed ceiling insulation R-value, less the R-value of the insulation on the duct.</u></li> </ol> </li> </ol>	Charles Cottrell, North American Insulation Manufacturers Association (NAIMA)	
42)	2015 IECC Table R405.5.2(1)	Incorporate the following approved 2015 IECC code change as of the end of the 2016 ICC Group B Public Comment Hearings: CE 259-16 Part II (Residential provisions) The remainder of the table is unchanged.	Roger LeBrun, VELUX America	D
43)	2015 IECC R406	<p><b>Revise Section R406 Energy Rating Index Compliance Alternative R406.1 Scope.</b> This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.</p> <p><b>R406.2 Mandatory requirements.</b> Compliance with this section requires that the mandatory provisions identified in Sections R401 and R403.5.3 be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or 402.1.3 of the 2009 <i>International Energy Conservation Code</i>. <b>Exception:</b> Supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6.</p> <p><b><del>R406.3 Energy Rating Index.</del></b> The Energy Rating Index (ERI) shall be <del>a numerical integer value that is based on a linear scale constructed such that the ERI reference design has an Index value of 100 and a residential building that uses no net purchased energy has an Index value of 0. Each integer value on the scale shall represent a 1 percent change determined in the total energy use of the rated design relative to the total energy use of the ERI reference design accordance with ANSI/RESNET/ICC 301 except for buildings constructed in accordance with the International Residential Code, the ERI reference design ventilation rate shall be in accordance with the following: .The ERI shall consider all energy used in the residential building.</del> <u>Energy used to recharge or refuel a vehicle for on-road (and off-site) transportation purposes shall not be included in the ERI reference design or the rated design.</u></p> <p><u>Ventilation rate = (0.01 x total square foot area of house) + (7.5 (N<sub>br</sub> + 1))</u> <b>Equation 4-1</b> where,  <u>Ventilation rate in units of cubic feet per minute</u>  <u>N<sub>br</sub> = Number of bedrooms</u></p> <p><b><del>R406.3.1 ERI reference design.</del></b>  <del>The ERI reference design shall be configured such that it meets the minimum requirements of the 2006 International Energy Conservation Code prescriptive requirements. The proposed residential building shall be shown to have an annual total normalized modified load less than or equal to the annual total loads of the ERI reference design.</del></p>	Amanda Hickman, Leading Builders of America	No Action in Lieu of Item 44

#	SECTION	SUMMARY	PROPONENT	ACT.*								
	2015 IECC R406	<p><b>R406.4 ERI-based compliance.</b> Compliance based on an ERI analysis requires that the <i>rated design</i> be shown to have an ERI less than or equal to the appropriate value listed in Table R406.4 when compared to the <i>ERI reference design</i>.</p> <p><b>TABLE R406.4 MAXIMUM ENERGY RATING INDEX</b></p> <table><tr><th>CLIMATE ZONE</th><th>ENERGY RATING<sup>a</sup> INDEX</th></tr><tr><td>2</td><td><del>52-57</del></td></tr><tr><td>3</td><td><del>51-57</del></td></tr><tr><td>4</td><td><del>54-62</del></td></tr></table> <p>a. Where on-site renewable energy is included for compliance using the ERI analysis per Section R406.4, the building shall meet the mandatory requirements with Section R406.2 and the building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.</p> <p><b>R406.5 Verification by approved agency.</b> Verification of compliance with Section R406 shall be completed by an <i>approved</i> third party.</p> <p><b>R406.6 Documentation.</b> Documentation of the software used to determine the ERI and the parameters for the residential building shall be in accordance with Sections R406.6.1 through R406.6.3.</p> <p><b>R406.6.1 Compliance software tools.</b> <del>Documentation verifying that the methods and accuracy of the compliance software tools conform to the provisions of this section</del> <u>ERI shall be provided to the code official. Approved Software Rating Tools in accordance with ANSI/RESNET/ICC 301.</u></p> <p><b>R406.6.2 Compliance report.</b> Compliance software tools shall generate a report that documents that the ERI of the <i>rated design</i> complies with Sections R406.3 and R406.4. The compliance documentation shall include the following information:</p> <ol style="list-style-type: none"><li>1. Address or other identification of the residential building.</li><li>2. An inspection checklist documenting the building component characteristics of the <i>rated design</i>. The inspection checklist shall show results for both the <i>ERI reference design</i> and the <i>rated design</i>, and shall document all inputs entered by the user necessary to reproduce the results.</li><li>3. Name of individual completing the compliance report.</li><li>4. Name and version of the compliance software tool.</li></ol> <p><b>Exception:</b> Multiple orientations. Where an otherwise identical building model is offered in multiple orientations, compliance for any orientation shall be permitted by documenting that the building meets the performance requirements in each of the four (north, east, south and west) cardinal orientations.</p> <p><b>R406.6.3 Additional documentation.</b> The <i>code official</i> shall be permitted to require the following documents:</p> <ol style="list-style-type: none"><li>1. Documentation of the building component characteristics of the <i>ERI reference design</i>.</li><li>2. A certification signed by the builder providing the building component characteristics of the <i>rated design</i>.</li><li>3. Documentation of the actual values used in the software calculations for the <i>rated design</i>.</li></ol> <p><del><b>R406.7 Calculation software tools.</b></del> <del>Calculation software, where used, shall be in accordance with Sections R406.7.1 through R406.7.3.</del></p> <p><del><b>R406.7.1 Minimum capabilities.</b></del> <del>Calculation procedures used to comply with this section shall be software tools capable of calculating the ERI as described in Section R406.3, and shall include the following capabilities:</del></p> <ol style="list-style-type: none"><li>1. <del>Computer generation of the <i>ERI reference design</i> using only the input for the <i>rated design</i>.</del></li></ol>	CLIMATE ZONE	ENERGY RATING <sup>a</sup> INDEX	2	<del>52-57</del>	3	<del>51-57</del>	4	<del>54-62</del>	Amanda Hickman, Leading Builders of America	
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4	<del>54-62</del>											

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		<p>The calculation procedure shall not allow the user to directly modify the building component characteristics of the <i>ERI reference design</i>.</p> <p>2. Calculation of whole building, as a single zone, sizing for the heating and cooling equipment in the <i>ERI reference design</i> residence in accordance with Section R403.7.</p> <p>3. Calculations that account for the effects of indoor and outdoor temperatures and part load ratios on the performance of heating, ventilating and air conditioning equipment based on climate and equipment sizing.</p> <p>4. Printed <i>code official</i> inspection checklist listing each of the <i>rated design</i> component characteristics determined by the analysis to provide compliance, along with their respective performance ratings.</p> <p><b>R406.7.2 R406.6.4 Specific approval.</b> Performance analysis tools meeting the applicable sections of Section R406 shall be <i>approved</i>. <del>Tools are permitted</del> Documentation demonstrating the approval of performance analysis tools in accordance with Section R406.6.1 shall be <del>provided to be approved based on meeting a specified threshold for a jurisdiction</del> <u>the code official</u>. The <i>code official</i> shall approve tools for a specified application or limited scope.</p> <p><b>R406.7.3 R406.6.5 Input values.</b> Where <del>a</del> calculations require input values not specified by Sections R402, R403, R404 and R405, those input values shall be taken from <del>an approved source</del> <u>ANSI/RESNET/ICC 301</u>.</p> <p><b>Add new standard to Chapter 6 Residential:</b> ANSI/RESNET/ICC 301-2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index First Published March 7, 2014 republished January 2016 An electronic version of standard ANSI/RESNET/ICC 301 is posted at: <a href="http://codes.iccsafe.org/app/book/content/PDF/ICC%20Standards/ICC_301-2014/ICC_RESNET_301.pdf">http://codes.iccsafe.org/app/book/content/PDF/ICC%20Standards/ICC_301-2014/ICC_RESNET_301.pdf</a></p>		
44)	2015 IECC R406	<p><b>SECTION R406 ENERGY RATING INDEX COMPLIANCE ALTERNATIVE</b></p> <p><b>R406.1 Scope.</b> This section establishes criteria for compliance using an Energy Rating Index (ERI) analysis.</p> <p><b>R406.2 Mandatory requirements.</b> Compliance with this section requires that the mandatory provisions identified in Sections R401 and R403.5.3 be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or 402.1.3 of the 2009 <i>International Energy Conservation Code</i>.</p> <p><b>Exception:</b> Supply and return ducts not completely inside the building thermal envelope shall be insulated to a minimum of R-6.</p> <p><b>R406.3 Energy Rating Index.</b> The Energy Rating Index (ERI) shall be <del>a numerical integer value that is based on a linear scale constructed such that the ERI reference design has an Index value of 100 and a residential building that uses no net purchased energy has an Index value of 0. Each integer value on the scale shall represent a 1 percent change determined in the total energy use of the rated design relative to the total energy use of the ERI reference design</del> <u>accordance with ANSI/RESNET/ICC 301 except for buildings constructed in accordance with the International Residential Code, where the ERI reference design ventilation rate shall be in accordance with the following:</u></p> <p style="padding-left: 40px;"><u>Ventilation rate = (0.01 x total square foot area of house) + (7.5 (N<sub>br</sub> + 1)) Equation 4-1</u> <u>where,</u> <u>Ventilation rate is defined in units of cubic feet per minute</u> <u>N<sub>br</sub> = Number of bedrooms</u></p> <p>The ERI shall consider all energy used in the <i>residential building</i> <u>including on-site renewable energy</u>. <u>Energy used to recharge or refuel a vehicle for on-road (and off-site) transportation purposes shall not be included in the ERI reference design or the rated design.</u></p>	Shan Arora, Southface	R

#	SECTION	SUMMARY	PROONENT	ACT.*								
	2015 IECC R406	<p><del><b>R406.3.1 ERI reference design.</b></del> The <i>ERI reference design</i> shall be configured such that it meets the minimum requirements of the 2006 <i>International Energy Conservation Code</i> prescriptive requirements. The proposed <i>residential building</i> shall be shown to have an annual total normalized modified load less than or equal to the annual total loads of the <i>ERI reference design</i>.</p> <p><b>R406.4 ERI-based compliance.</b> Compliance based on an ERI analysis requires that the <i>rated design</i> be shown to have an ERI less than or equal to the appropriate value listed in Table R406.4 when compared to the <i>ERI reference design</i>.</p> <p><b>TABLE R406.4 MAXIMUM ENERGY RATING INDEX</b></p> <table><tr><th>CLIMATE ZONE</th><th>ENERGY RATING INDEX</th></tr><tr><td>2</td><td><del>52-57</del></td></tr><tr><td>3</td><td><del>51-57</del></td></tr><tr><td>4</td><td><del>54-62</del></td></tr></table> <p><b>R406.5 Verification by approved agency.</b> Verification of compliance with Section R406 shall be completed by an <i>approved</i> third party.</p> <p><b>R406.6 Documentation.</b> Documentation of the software used to determine the ERI and the parameters for the residential building shall be in accordance with Sections R406.6.1 through R406.6.3.</p> <p><b>R406.6.1 Compliance software tools.</b> <del>Documentation verifying that the methods and accuracy of the compliance software tools conform to the provisions of this section</del> The ERI shall be <u>determined using provided to the code official Approved Software Rating Tools in accordance with ANSI/RESNET/ICC 301.</u></p> <p><b>R406.6.2 Compliance report.</b> Compliance software tools shall generate a report that documents that the ERI of the <i>rated design</i> complies with Sections R406.3 and R406.4. The compliance documentation shall include the following information:</p> <ol style="list-style-type: none"><li>1. Address or other identification of the residential building.</li><li>2. An inspection checklist documenting the building component characteristics of the <i>rated design</i>. The inspection checklist shall show results for both the <i>ERI reference design</i> and the <i>rated design</i>, and shall document all inputs entered by the user necessary to reproduce the results.</li><li>3. Name of individual completing the compliance report.</li><li>4. Name and version of the compliance software tool.</li></ol> <p><b>Exception:</b> Multiple orientations. Where an otherwise identical building model is offered in multiple orientations, compliance for any orientation shall be permitted by documenting that the building meets the performance requirements in each of the four (north, east, south and west) cardinal orientations.</p> <p><b>R406.6.3 Additional documentation.</b> The <i>code official</i> shall be permitted to require the following documents:</p> <ol style="list-style-type: none"><li>1. Documentation of the building component characteristics of the <i>ERI reference design</i>.</li><li>2. A certification signed by the builder providing the building component characteristics of the <i>rated design</i>.</li><li>3. Documentation of the actual values used in the software calculations for the <i>rated design</i>.</li></ol> <p><del><b>R406.7 Calculation software tools.</b></del> Calculation software, where used, shall be in accordance with Sections R406.7.1 through R406.7.3.</p>	CLIMATE ZONE	ENERGY RATING INDEX	2	<del>52-57</del>	3	<del>51-57</del>	4	<del>54-62</del>	Shan Arora, Southface	
CLIMATE ZONE	ENERGY RATING INDEX											
2	<del>52-57</del>											
3	<del>51-57</del>											
4	<del>54-62</del>											

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		<p><del><b>R406.7.1 Minimum capabilities.</b></del> Calculation procedures used to comply with this section shall be software tools capable of calculating the ERI as described in Section R406.3, and shall include the following capabilities:</p> <p><del>1. Computer generation of the <i>ERI reference design</i> using only the input for the <i>rated design</i>.</del> The calculation procedure shall not allow the user to directly modify the building component characteristics of the <i>ERI reference design</i>.</p> <p><del>2. Calculation of whole building, as a single <i>zone</i>, sizing for the heating and cooling equipment in the <i>ERI reference design</i> residence in accordance with Section R403.7.</del></p> <p><del>3. Calculations that account for the effects of indoor and outdoor temperatures and part load ratios on the performance of heating, ventilating and air conditioning equipment based on climate and equipment sizing.</del></p> <p><del>4. Printed <i>code official</i> inspection checklist listing each of the <i>rated design</i> component characteristics determined by the analysis to provide compliance, along with their respective performance ratings.</del></p> <p><del><b>R406.7.2 R406.6.4 Specific approval.</b></del> Performance analysis tools meeting the applicable sections of Section R406 shall be <i>approved</i>. <del>Tools are permitted</del> Documentation demonstrating the approval of performance analysis tools in accordance with Section R406.6.1 shall be <del>provided to be <i>approved</i> based on meeting a specified threshold for a jurisdiction</del> the <i>code official</i>. The <i>code official</i> shall approve tools for a specified application or limited scope.</p> <p><del><b>R406.7.3 R406.6.5 Input values.</b></del> Where<del>n</del> calculations require input values not specified by Sections R402, R403, R404 and R405, those input values shall be taken from an <del>approved source</del> <u>ANSI/RESNET/ICC 301</u>.</p> <p><b>Add new standard to Chapter 6 Residential:</b> ANSI/RESNET/ICC 301-2014 Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index First Published March 7, 2014 republished January 2016.</p>												
45)	2015 IECC R406.4	<p><b>Revise Table R406.4 and add footnote “a” as follows:</b></p> <table><tr><th colspan="2">TABLE R406.4 MAXIMUM ENERGY RATING INDEX <sup>a</sup></th></tr><tr><th>CLIMATE ZONE</th><th>ENERGY RATING INDEX</th></tr><tr><td>2</td><td><del>52</del> 57</td></tr><tr><td>3</td><td><del>51</del> 57</td></tr><tr><td>4</td><td><del>54</del> 62</td></tr></table> <p>a. <u>When on-site renewable energy is included for compliance using the ERI analysis per Section R406.4, the building shall meet the mandatory requirements with Section R406.2 and the building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table R402.1.2 or Table R402.1.4 of the 2015 International Energy Conservation Code.</u></p>	TABLE R406.4 MAXIMUM ENERGY RATING INDEX <sup>a</sup>		CLIMATE ZONE	ENERGY RATING INDEX	2	<del>52</del> 57	3	<del>51</del> 57	4	<del>54</del> 62	Eric Lacey, RECA	No Action in Lieu of Item 44
TABLE R406.4 MAXIMUM ENERGY RATING INDEX <sup>a</sup>														
CLIMATE ZONE	ENERGY RATING INDEX													
2	<del>52</del> 57													
3	<del>51</del> 57													
4	<del>54</del> 62													
46)	2015 IECC Appendix RA	<p><b>Delete without substitution:</b> <del>APPENDIX RA (IRC APPENDIX T) RECOMMENDED PROCEDURE FOR WORST CASE TESTING OF ATMOSPHERIC VENTING SYSTEMS UNDER R402.4 OR R405 CONDITIONS ≤ 5ACH<sub>50</sub></del></p> <ul style="list-style-type: none"><li><i>All Sections and Tables are to be deleted and are not shown due to space considerations.</i></li></ul>	Andrea L Papageorge, Southern Company Gas	A										

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47)	2015 IECC Table C402.1.3	<div>Revise Table C402.1.3 Opaque Thermal Envelope Insulation Component Minimum Requirements- R-value Method to read as follows:</div> <table><tr><th colspan="4">TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS R-VALUE METHOD</th></tr><tr><th rowspan="3">Climate Zone</th><th colspan="2">4 EXCEPT MARINE</th><th rowspan="5">remainder of table left unchanged</th></tr><tr><th>All other</th><th>Group R</th></tr><tr><th colspan="2">Slab-on-grade floors</th></tr><tr><td>Unheated slabs</td><td>R-10 for 24" below NR</td><td>R-10 for 24" below NR</td></tr><tr><td>Heated slabs</td><td>R-15 for 24" below</td><td>R-15 for 24" below</td></tr></table>	TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS R-VALUE METHOD				Climate Zone	4 EXCEPT MARINE		remainder of table left unchanged	All other	Group R	Slab-on-grade floors		Unheated slabs	R-10 for 24" below NR	R-10 for 24" below NR	Heated slabs	R-15 for 24" below	R-15 for 24" below	James Martin, Building Officials Association of Georgia (BOAG)	R
TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS R-VALUE METHOD																						
Climate Zone	4 EXCEPT MARINE		remainder of table left unchanged																			
	All other	Group R																				
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Heated slabs	R-15 for 24" below	R-15 for 24" below																				
48)	2015 IECC C402.4 - C402.4.3.2	<div>C402.4 Fenestration (Prescriptive).</div> <div>Fenestration shall comply with Sections C402.4 through C402.4.4 and Table C402.4. <del>Daylight responsive controls shall comply with this section and Section C405.2.3.1.</del></div> <div>Delete C402.4.1.1 Increased vertical fenestration area with daylight responsive controls.</div> <div>Delete C402.4.1.2 Increased skylight area with daylight responsive controls.</div> <div>Delete C402.4.2 Minimum skylight fenestration area.</div> <div>Delete C402.4.2.1 Lighting controls in daylight zones under skylights.</div> <div>Delete C402.4.2.2 Haze factor.</div> <div>Delete C402.4.3.1 Increased skylight SHGC.</div> <div>Delete C402.4.3.2 Increased skylight U-factor.</div>	James Martin, Representing Building Officials Association of Georgia (BOAG)	W																		
49)	2015 IECC C403.2.3	<div>C403.2.3 HVAC equipment performance requirements.</div> <div>Modification to C403.2.3 to reference 90.1-2013 HVAC efficiencies.</div>	John Pruitt, Representing ASHRAE	R																		
50)	2015 IECC C403.2.3	<div>C403.2.3 HVAC equipment performance requirements.</div> <div>Modification to C403.2.3 to reference 90.1-2016 HVAC efficiencies.</div>	John Pruitt, Representing ASHRAE	W																		
51)	2015 IECC C403.4.2.6	<div>C403.4.2.6 Pump Isolation.</div> <div>Chilled water plants including more than one chiller shall have the capability to reduce flow automatically through the chiller plant when a chiller is shut down. Chillers piped in series for the purpose of increased temperature differential shall be considered as one chiller.</div> <div>Boiler plants including more than one boiler shall have the capability to reduce flow automatically through the boiler plant when a boiler is shut down. Flow isolation shall allow time for adequate thermal dissipation of residual heat to prevent relief before isolating boiler(s).</div>	Scott Walters, Representing American Council of Engineering Companies (ACEC)	R																		
52)	C405.2.3- C405.2.3- 405.2.3.2- C405-2-3-3	<div>Delete C405.2.3 Daylight-responsive controls. Daylight-responsive</div> <div>Delete C405.2.3.1 Daylight-responsive control function.</div> <div>Delete C405.2.3.2 Sidelight daylight zone.</div> <div>Delete C405.2.3.3 Toplight daylight zone.</div>	James Martin, Representing BOAG	W																		
53)	2015 IECC C408	<div>Delete SECTION C408 SYSTEM COMMISSIONING entirely.</div>	James Martin, Representing BOAG	W																		



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54)	2015 IECC C408.2	<p><b>C408.2 Mechanical systems and service water-heating systems commissioning and completion requirements.</b> Prior to final mechanical and plumbing inspections, the registered design professional or approved agency shall provide evidence of mechanical systems commissioning and completion in accordance with the provisions of this section.</p> <p>Construction document notes shall clearly indicate provisions for commissioning and completion requirements in accordance with this section and are permitted to refer to specifications for further requirements. Copies of all documentation shall be given to the owner or owner’s authorized agent and made available to the code official upon request in accordance with Sections C408.2.4 and C408.2.5</p> <p>At the discretion of the Owner or owner’s agent commissioning of mechanical systems is encouraged to assure validation of system performance. Functional performance testing by a contractor or third party is required. However, code officials shall not require commissioning as a precursor to issuance of certificates of occupancy.</p>	Scott Walters, Representing American Council of Engineering Companies (ACEC)	W																																																																																																									
55)	2015 IECC C408.2.3.1	<p><b>C408.2.3.1 Equipment.</b> Equipment functional performance testing shall demonstrate the installation and operation of components, systems, and system-to-system interfacing relationships in accordance with approved plans and specifications such that operation, function, and maintenance serviceability for each of the commissioned systems is confirmed. Testing shall include all modes and sequence of operation, including under full-load, part –load and the following emergency conditions:</p> <ol style="list-style-type: none"><li>1. All modes as described in the sequence of operation.</li><li>2. Redundant or automatic back-up mode.</li><li>3. Performance of alarms.</li><li>4. Mode of operation upon a loss of power and restoration of power.</li></ol> <p><b>Exception:</b> Unitary or packaged HVAC equipment listed in Tables C403.2.3 (1) through C403.2.3 (3) that do not require supply air economizers.</p>	Scott Walters, Representing American Council of Engineering Companies (ACEC)	W																																																																																																									
56)	2015 IECC Table R402.1.2 & R402.1.4	<p>Revise Table R402.1.2 Insulation and Fenestration Requirements by Component and Table R402.1.4 Equivalent U-Factors to read as follows:</p> <table><tr><th colspan="12">TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT</th></tr><tr><th>Climate Zone</th><th>Fenestration U-Factor</th><th>Skylight U-Factor</th><th>Glazed Fenestration SHGC</th><th>Ceiling R-Value</th><th>Wood Frame Wall R-Value</th><th>Attic Kneewall R-Value</th><th>Mass Wall R-Value</th><th>Floor R-Value</th><th>Basement Wall R-Value</th><th>Slab R-Value &amp; Depth</th><th>Crawl Space Wall R-Value</th></tr><tr><td>2</td><td><del>0.40</del> 0.35</td><td>0.65</td><td><del>0.25</del> 0.27</td><td>38</td><td>13</td><td>18</td><td>4/6</td><td>13</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td><del>0.25</del> 0.27</td><td>38</td><td><del>20-OR-13+5h</del> 13</td><td>18</td><td>8/13</td><td>19</td><td>5/13F</td><td>0</td><td>5/13</td></tr><tr><td>4 except marine</td><td>0.35</td><td>0.55</td><td><del>.40</del> 0.27</td><td><del>49</del> 38</td><td><del>20-OR-13+5h</del> 13</td><td>18</td><td>8/13</td><td>19</td><td>10/13</td><td><del>10, 2 FT</del> 0</td><td>10/13</td></tr></table> <p><i>h. The first value is cavity insulation, the second value is continuous. So "13+5" means R-13 cavity insulation plus R-5 continuous insulation.</i></p> <table><tr><th colspan="9">TABLE R402.1.4 EQUIVALENT U-FACTORS</th></tr><tr><th>Climate Zone</th><th>Fenestration U-Factor</th><th>Skylight U-Factor</th><th>Ceiling U-Factor</th><th>Frame Wall U-Factor</th><th>Mass Wall U-Factor</th><th>Floor U-Factor</th><th>Basement Wall U-Factor</th><th>Crawl Space Wall U-Factor</th></tr><tr><td>2</td><td><del>0.40</del> 0.35</td><td>0.65</td><td>0.030</td><td>0.084</td><td>0.165</td><td>0.064</td><td>0.360</td><td>0.477</td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td>0.030</td><td><del>0.060</del> 0.084</td><td>0.098</td><td>0.047</td><td>0.091</td><td>0.136</td></tr><tr><td>4 except marine</td><td>0.35</td><td>0.55</td><td><del>0.026</del> 0.030</td><td><del>0.060</del> 0.084</td><td>0.098</td><td>0.047</td><td>0.059</td><td>0.065</td></tr></table>	TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT												Climate Zone	Fenestration U-Factor	Skylight U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Attic Kneewall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value & Depth	Crawl Space Wall R-Value	2	<del>0.40</del> 0.35	0.65	<del>0.25</del> 0.27	38	13	18	4/6	13	0	0	0	3	0.35	0.55	<del>0.25</del> 0.27	38	<del>20-OR-13+5h</del> 13	18	8/13	19	5/13F	0	5/13	4 except marine	0.35	0.55	<del>.40</del> 0.27	<del>49</del> 38	<del>20-OR-13+5h</del> 13	18	8/13	19	10/13	<del>10, 2 FT</del> 0	10/13	TABLE R402.1.4 EQUIVALENT U-FACTORS									Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor	2	<del>0.40</del> 0.35	0.65	0.030	0.084	0.165	0.064	0.360	0.477	3	0.35	0.55	0.030	<del>0.060</del> 0.084	0.098	0.047	0.091	0.136	4 except marine	0.35	0.55	<del>0.026</del> 0.030	<del>0.060</del> 0.084	0.098	0.047	0.059	0.065	Neal Davis, Representing Home Builders Association of Georgia (HBAG)	No Action in Lieu of Item 57
TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT																																																																																																													
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57)	2015 IECC Table R402.1.2 & R402.1.4	<div>Revise Table R402.1.2 Insulation and Fenestration Requirements by Component and Table R402.1.4 Equivalent U-Factors to read as follows:</div> <table><tr><th colspan="12">TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT</th></tr><tr><th>Climate Zone</th><th>Fenestration U-Factor</th><th>Skylight U-Factor</th><th>Glazed Fenestration SHGC</th><th>Ceiling R-Value</th><th>Wood Frame Wall R-Value</th><th>Attic Kneewall R-Value</th><th>Mass Wall R-Value</th><th>Floor R-Value</th><th>Basement Wall R-Value</th><th>Slab R-Value &amp; Depth</th><th>Crawl Space Wall R-Value</th></tr><tr><td>2</td><td><del>0.40</del> 0.35</td><td>0.65</td><td><del>0.25</del> 0.27</td><td>38</td><td>13</td><td>18</td><td>4/6</td><td>13</td><td>0</td><td>0</td><td>0</td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td><del>0.25</del> 0.27</td><td>38</td><td><del>20 OR 13+5h</del> 13</td><td>18</td><td>8/13</td><td>19</td><td>5/13<sup>f</sup></td><td>0</td><td>5/13</td></tr><tr><td>4 except marine</td><td>0.35</td><td>0.55</td><td><del>0.40</del> 0.27</td><td><del>49</del> 38</td><td><del>20 OR 13+5h</del> 13</td><td>18</td><td>8/13</td><td>19</td><td>10/13</td><td><del>10, 2 FT</del> 0</td><td>10/13</td></tr></table> <div>h. The first value is cavity insulation, the second value is continuous. So "13+5" means R 13 cavity insulation plus R 5 continuous insulation.</div> <table><tr><th colspan="9">TABLE R402.1.4 EQUIVALENT U-FACTORS</th></tr><tr><th>Climate Zone</th><th>Fenestration U-Factor</th><th>Skylight U-Factor</th><th>Ceiling U-Factor</th><th>Frame Wall U-Factor</th><th>Mass Wall U-Factor</th><th>Floor U-Factor</th><th>Basement Wall U-Factor</th><th>Crawl Space Wall U-Factor</th></tr><tr><td>2</td><td><del>0.40</del> 0.35</td><td>0.65</td><td>0.030</td><td>0.084</td><td>0.165</td><td>0.064</td><td>0.360</td><td>0.477</td></tr><tr><td>3</td><td>0.35</td><td>0.55</td><td>0.030</td><td><del>0.060</del> 0.084</td><td>0.098</td><td>0.047</td><td>0.091<sup>c</sup></td><td>0.136</td></tr><tr><td>4 except marine</td><td>0.35</td><td>0.55</td><td><del>0.026</del> 0.030</td><td><del>0.060</del> 0.084</td><td>0.098</td><td>0.047</td><td>0.059</td><td>0.065</td></tr></table>	TABLE R402.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT												Climate Zone	Fenestration U-Factor	Skylight U-Factor	Glazed Fenestration SHGC	Ceiling R-Value	Wood Frame Wall R-Value	Attic Kneewall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value & Depth	Crawl Space Wall R-Value	2	<del>0.40</del> 0.35	0.65	<del>0.25</del> 0.27	38	13	18	4/6	13	0	0	0	3	0.35	0.55	<del>0.25</del> 0.27	38	<del>20 OR 13+5h</del> 13	18	8/13	19	5/13 <sup>f</sup>	0	5/13	4 except marine	0.35	0.55	<del>0.40</del> 0.27	<del>49</del> 38	<del>20 OR 13+5h</del> 13	18	8/13	19	10/13	<del>10, 2 FT</del> 0	10/13	TABLE R402.1.4 EQUIVALENT U-FACTORS									Climate Zone	Fenestration U-Factor	Skylight U-Factor	Ceiling U-Factor	Frame Wall U-Factor	Mass Wall U-Factor	Floor U-Factor	Basement Wall U-Factor	Crawl Space Wall U-Factor	2	<del>0.40</del> 0.35	0.65	0.030	0.084	0.165	0.064	0.360	0.477	3	0.35	0.55	0.030	<del>0.060</del> 0.084	0.098	0.047	0.091 <sup>c</sup>	0.136	4 except marine	0.35	0.55	<del>0.026</del> 0.030	<del>0.060</del> 0.084	0.098	0.047	0.059	0.065	James Martin, Representing Building Officials Association of Georgia (BOAG)	A
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58)	2015 IECC R402.4.1.2	<b>R402.4.1.2 Testing.</b> All one and two-family dwelling units shall be tested and verified to less than five air changes per hour at 50 Pascals (ACH50) for Climate Zones 2, 3, and 4.	Neal Davis, (HBAG)	R																																																																																																									
59)	2015 IECC R402.4.1.2	<b>R402.4.1.2 Testing.</b> Testing shall be conducted in accordance with ASTM E 779 or ASTM E1827 or ANSI/RESNET/ICC 380 and reported at a pressure of 0.2-inch w.g. (50 Pascals). Where required by the code official, testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. <u>Testing shall be conducted by a certified duct and envelope tightness (DET) verifier.</u>	James Martin, Representing Building Officials Association of Georgia (BOAG)	R																																																																																																									
60)	2015 IECC R402.4.1.2	<b>R402.4.1.2 Testing.</b> <del>Where required by code official, testing shall be conducted by an approved third party.</del> Bring Forward Current GA Amendment: <b>R402.4.1.2 Testing.</b> <u>Testing shall be conducted by a certified duct and envelope tightness (DET) verifier.</u> <b>Add definition of ‘CERTIFIED DUCT AND ENVELOPE TIGHTNESS (DET) VERIFIER’ as follows:</b> <b>CERTIFIED DUCT AND ENVELOPE TIGHTNESS (DET) VERIFIER.</b> A certified DET verifier shall be a certified Home Energy Rating Systems (HERS) rater, or be a Building Performance Institute (BPI) Analyst, or be an Infiltration Duct Leakage (IDL) Certified, or successfully complete a certified DET verifier course that is approved by the Georgia Department of Community Affairs.	Neal Davis, Representing Home Builders Association of Georgia (HBAG)	R																																																																																																									

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61)	2015 IECC C403.3	Delete the below paragraph from the exception section of C403.3 Economizers (Prescriptive) <del>The total supply capacity of all fan cooling units not provided with economizers shall not exceed 20 percent of the total supply capacity of all fan cooling units in the building or 300,000 Btu/h (88 kW), whichever is greater.</del>	John Pruitt, Representing ASHRAE	A
62)	2015 IECC C403.2.9	<b>C403.2.9 Duct and plenum insulation and sealing.</b> Supply and return air ducts and plenums shall be insulated with a minimum of R-6 insulation where located in unconditioned spaces and where located outside the building with a minimum of R-8 insulation in Climate Zones 2 through 4 <del>and a minimum of R-12 insulation in Climate Zones 5 through 8.</del> Where located within a building envelope assembly, the duct or plenum shall be separated from the building exterior or unconditioned or exempt spaces by a minimum of R-8 insulation in Climate Zones 2 through 4 <del>and a minimum of R-12 insulation in Climate Zones 5 through 8.</del> <b>Exceptions:</b> <ol style="list-style-type: none"> <li>Where located within equipment.</li> <li>Where the design temperature difference between the interior and exterior of the duct or plenum is not greater than 15 degrees F (8 degrees C).</li> </ol> Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with section <del>403.2.4</del> <u>C403.2.9.2</u> of these Georgia State Supplements and Amendments. <del>Joints and seams shall comply with Section 603.9 of the International Mechanical Code.</del> <b>Exceptions:</b> <ol style="list-style-type: none"> <li><u>Air-impermeable spray foam product shall be permitted to be applied without additional joint seals.</u></li> <li><u>For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.</u></li> <li><u>Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.</u></li> <li><u>Sealing that would void product listings is not required.</u></li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	R
63)	2015 IECC C403.3.9.2	Add new Section C403.2.9.2, 'Joints, seams and Connections', to read as follows: <b>C403.2.9.2 Joints, Seams and Connections.</b> All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in <i>SMACNA HVAC Duct Construction Standards- Metal and Flexible</i> and <i>NAIMA Fibrous Glass Duct Construction Standards</i> . All joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes. Without exception all closure systems shall have mastic applied that is at least 0.08 inches (2mm) thick. <u>Closure systems used to seal flexible air ducts and flexible air connections shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct connections to flanges of air distribution systems equipment shall be sealed and mechanically fastened. Mechanical fastener for use with flexible non-metallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25.4 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint.</u> <u>Closure systems used to seal metal ductwork shall be installed in accordance with manufacturer's instructions. Round metallic ducts shall be mechanically fastened by means of at least three sheet metal screws or rivets spaced equally around the joint. Unlisted duct tape shall not be permitted as a sealant on any duct.</u> <b>Exceptions:</b> <ol style="list-style-type: none"> <li><u>Spray polyurethane foam shall be permitted to be applied without additional joint seals.</u></li> <li><u>Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.</u></li> <li><u>Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressure less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.</u></li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	R

#	SECTION	SUMMARY	PROPONENT	ACT.*
64)	2015 IECC R403.3.6	<p>Add a new Section R403.3.6, 'Joints , seams and Connections', to read as follows:</p> <p><b>R403.3.6 Joints, seams and Connections.</b> All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in <i>SMACNA HVAC Duct Construction Standards- Metal and Flexible</i> and <i>NAIMA Fibrous Glass Duct Construction Standards</i>. All joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes. Without exception all closure systems shall have mastic applied that is at least 0.08 inches (2mm) thick. Closure systems used to seal flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fastener for use with flexible non-metallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 ½" inch (38 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joints.</p> <p>Closure systems used to seal metal ductwork shall be installed in accordance with manufacturer's instructions. Round metallic ducts shall be mechanically fastened by means of at least three sheet metal screws or rivets spaced equally around the joint. Unlisted duct tape shall not be permitted as a sealant on any duct.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> <li>1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.</li> <li>2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.</li> <li>3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.</li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	R
65)	2015 IECC R403.3.2	<p>Revise Section R403.3.2 'Sealing (Mandatory)', to read as follows:</p> <p><b>R403.3.2 Sealing (Mandatory).</b> Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with section <del>403.2.4 R403.3.6</del> of these Georgia State Supplements and Amendments. <del>Joints and seams shall comply with either the International Mechanical Code or International Residential Code, as applicable.</del> Exceptions:</p> <ol style="list-style-type: none"> <li>1. Air-impermeable spray foam product shall be permitted to be applied without additional joint seals.</li> <li>2. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams, and locking-type joints and seams of other than the snap-lock and button-lock types.</li> <li>3. <u>Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.</u></li> <li>4. <u>Sealing that would void product listings is not required.</u></li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	A
66)	2015 IECC R403.3.3	<p><b>R403.3.3 Duct testing (Mandatory).</b> Ducts shall be pressure tested to determine air leakage by one of the following methods:</p> <ol style="list-style-type: none"> <li>1. <b>Rough-in test:</b> Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test.</li> <li>2. <b>Post-construction test:</b> Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.</li> </ol> <p>Exception:</p> <ol style="list-style-type: none"> <li>1. A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.</li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	R

#	SECTION	SUMMARY	PROPONENT	ACT.*
		<ol style="list-style-type: none"> <li>2. <u>Duct tightness testing is not required for existing duct systems unless more than 50% of the duct system is modified.</u></li> <li>3. <u>If the air handler, furnace or evaporator coil is replaced on an existing system, all joints, seams and connections from equipment to duct system and duct system connections to plenums within 5 feet from the new work shall meet the sealing requirements of this code and be verified by a visual inspection by the state licensed conditioned air contractor or by a DET Verifier.</u></li> </ol> <p>A report of the results of the test shall be signed by the party conducting the test and provided to the <del>code official</del> owner or the owner's agent and, if requested, to the <u>code official</u>.</p>		
67)	2015 IECC R403.5.4	<p>Revise Section R403.5.4 'Drain water heat recovery units', to read as follows:</p> <p><b>R403.5.4 Drain water heat recovery units.</b> Drain water heat recovery units shall comply with CSA B55.2 or IAPMO PS 92. <u>Vertical drain water heat recovery units shall be tested in accordance with CSA B55.1 and have a minimum effectiveness of 42 percent when tested in accordance with CSA B55.1. Sloped drain water heat recovery units shall be tested in accordance with IAPMO IGC 346 and have a minimum rated effectiveness of 42 percent when tested in accordance with IAPMO IGC 346 at the minimum slope specified in the Georgia plumbing code.</u> Potable water-side pressure loss of <u>vertical</u> drain water heat recovery units shall be less than 3 psi (20.7 kPa) for individual units connected to one or two showers. Potable water-side pressure loss of <u>vertical</u> drain water heat recovery units shall be less than 2 psi (13.8 pKa) for individual units connected to three or more showers. <u>Potable water-side pressure loss of sloped drain water heat recovery units shall be less than 4 psi (20.7 kPa).</u></p>	Ryan Taylor, Representing SCAC and the American Institute of Architect, GA Association (AIA)	A
68)	2015 IECC R403.3.4	<p><b>R403.3.4 Duct leakage (Prescriptive) (Mandatory).</b> The total leakage of the ducts, where measured <u>by one of the following methods</u> in accordance with Section R403.3.3 shall be as follows:</p> <ol style="list-style-type: none"> <li>1. <b>Rough-in test:</b> The total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 square feet (9.29 m<sup>2</sup>) of conditioned floor area where the air handler is installed at the time of the test. <del>Where the air handler is not installed at the time of the test, the total leakage shall be less than or equal to 3 cubic feet per minute (85 L/min) per 100 square feet (9.29m<sup>2</sup>) of conditioned floor space.</del></li> <li>2. <b>Post-construction test:</b> Total leakage shall be less than or equal to 4 cubic feet per minute (113.3 L/min) per 100 sq. feet (9.29 m<sup>2</sup>) of conditioned floor area.</li> </ol> <p><b>Exception:</b></p> <ol style="list-style-type: none"> <li>1. <u>A duct air leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.</u></li> <li>2. <u>Duct tightness testing is not required for existing duct systems unless more than 50% of the duct system is modified.</u></li> <li>3. <u>If the air handler, furnace or evaporator coil is replaced on an existing system, all joints, seams and connections from equipment to duct system and duct system connections to plenums within 5 feet from the new work shall meet the sealing requirements of this code and be verified by a visual inspection by the state licensed conditioned air contractor or by a DET Verifier.</u></li> </ol>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	R
69)	2015 IECC R502.1.1.2	<p><b>R502.1.1.2 Heating and cooling systems.</b> New heating, cooling and duct systems that are part of the addition shall comply with Sections R403.1, R403.2, R403.3, R403.5 and R403.6.</p> <p><b>Exception:</b> <del>Where ducts from an existing heating and cooling system are extended to an addition, duct systems with less than 40 linear feet (12.19 m) in unconditioned spaces shall not be required to be tested in accordance with Section R403.3.3.</del> <u>Duct tightness testing is not required for existing duct systems unless more than 50% of the existing duct system is modified.</u></p>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	A

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70)	2015 IECC R503.1.2	<b>R503.1.2 Heating and cooling systems.</b> New heating, cooling and duct systems that are part of the alteration shall comply with Sections R403.1, R403.2, R403.3 and R403.6. <b>Exception:</b> <del>Where ducts from an existing heating and cooling system are extended, duct systems with less than 40 linear feet (12.19 m) in unconditioned spaces shall not be required to be tested in accordance with Section R403.3.3. Duct tightness testing is not required for existing duct systems unless more than 50% of the existing duct system is modified.</del>	Elaine Powers, Representing Conditioned Air Association of Georgia (CAAG)	<b>A</b>																																																							
71)	2015 IECC R403.7	Revise R403.7 Equipment sizing and efficiency rating and add the following sentence at the end: <b>R403.7 Equipment sizing and efficiency rating (Mandatory).</b> For automatically modulating capacity heating and cooling equipment, the system shall be deemed to comply with <u>appropriate portions of Manual S provided the lowest output capacity of the equipment is less than the peak design load as determined by Manual J.</u>	Jeffery Sauls, Energy Vanguard, Elaine Powers and Mike Barcik	<b>A</b>																																																							
72)	2015 IECC R402.1.6	<p>Add a new Section R402.1.6, Compliance Alternative Constraints to read as follows: <b>R402.1.6 Compliance Alternative Constraints. (Mandatory)</b> Where Compliance Alternative Pathways are used, the minimum R-values, maximum U-factors, and maximum SHGCs for thermal envelope components in projects complying under this code (including the use of REScheck) shall be according to Table 402.1.1. Compliance Alternative Pathways include Total UA Alternative, Simulated Performance Alternative, and Energy Rating Index Alternative. <u>Add a new Table 402.1.1, ‘Minimum Insulation R-Values for Envelope Components When Trade-offs Are Used’ to read as follows:</u></p> <table><tr><th colspan="11">Table R402.1.1 MINIMUM INSULATION R-VALUES FOR ENVELOPE COMPONENTS WHEN TRADE-OFFS ARE USED</th></tr><tr><th>Climate Zone</th><th>Wood Framed Walls</th><th>Mass Wall</th><th>Attic Kneewall</th><th>Basement Wall</th><th>Crawl Wall</th><th>Floor Over Unheated Spaces</th><th>Ceilings with Attic Space</th><th>Vaulted Unvented Roofline Air-impermeable</th><th>Vaulted Vented Roofline Air-permeable</th><th>Vaulted Unvented Roofline Air-permeable</th></tr><tr><td>2</td><td>13</td><td>4</td><td>18</td><td>0</td><td>0</td><td>13</td><td>30</td><td><u>20</u></td><td><u>20</u></td><td><u>20</u>+5*</td></tr><tr><td>3</td><td>13</td><td>5</td><td>18</td><td>5</td><td>5</td><td>13</td><td>30</td><td><u>20</u></td><td><u>20</u></td><td><u>20</u>+5*</td></tr><tr><td>4</td><td>13</td><td>5</td><td>18</td><td>5</td><td>5</td><td>13</td><td>30</td><td><u>20</u></td><td><u>20</u></td><td><u>20</u>+15*</td></tr></table> <p>Window U-Factor 0.5 max with SHGC 0.30 max</p> <p>* Air -impermeable as per IRC 806.5</p> <p>Note 1: Weather-stripped hinged vertical doors (minimum R-5 insulation or maximum U-0.20), weather-stripped hatches/scuttle hole covers (minimum R-19 insulation or maximum U-0.05), or weather-stripped and disappearing/ pull-down stairs (minimum R-5 insulation or maximum U-0.20) shall be deemed to meet the minimum insulation R-values of the corresponding envelope element. Note 2: Any mass wall (masonry, CMU, etc.) Note 3: Attic kneewall for the purpose of this code is defined as any vertical or near vertical wall in the building envelope that has conditioned space on one side and attic space on the other side. Exception: When the building roofline is insulated, the former kneewall is classified as an interior wall. Note 4: Examples of air-impermeable insulation include spray foam and rigid foam board. Examples of air-permeable insulation include fiberglass batts and cellulose. See ‘Roofline Installed Insulation Options’ in <u>Appendix RC</u>, of these Georgia State Supplements and Amendments for details.</p>	Table R402.1.1 MINIMUM INSULATION R-VALUES FOR ENVELOPE COMPONENTS WHEN TRADE-OFFS ARE USED											Climate Zone	Wood Framed Walls	Mass Wall	Attic Kneewall	Basement Wall	Crawl Wall	Floor Over Unheated Spaces	Ceilings with Attic Space	Vaulted Unvented Roofline Air-impermeable	Vaulted Vented Roofline Air-permeable	Vaulted Unvented Roofline Air-permeable	2	13	4	18	0	0	13	30	<u>20</u>	<u>20</u>	<u>20</u> +5*	3	13	5	18	5	5	13	30	<u>20</u>	<u>20</u>	<u>20</u> +5*	4	13	5	18	5	5	13	30	<u>20</u>	<u>20</u>	<u>20</u> +15*	Mike Barcik, Southface, Representing (GEFA)	<b>A</b>
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#	SECTION	SUMMARY	PROPONENT	ACT.*
73)	2015 IECC R403.6	<p>Revise R403.6 Mechanical Ventilation to read as follows:</p> <p><b>R403.6 Mechanical ventilation (Mandatory).</b> Where required, the building shall be provided with ventilation that meets the requirements of the <i>International Residential Code</i> or <i>International Mechanical Code</i>, as applicable, <u>or with ASHRAE 62.2-2016 (in entirety)</u> or with other approved means of ventilation. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.</p> <p><b>R403.6.1 Whole-house mechanical ventilation system fan efficacy.</b> Mechanical ventilation system fans shall meet the efficacy requirements of Table R403.6.1.</p> <p><b>Exception:</b> Where mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.</p>	Mike Barcik, Southface, Representing (GEFA)	R
74)	2015 IECC R403.1.2	<p>Revise R403.1.2 Heat pump supplementary heat (Mandatory) to read as follows:</p> <p><b>R403.1.2 Heat pump supplementary heat (Mandatory).</b></p> <p>Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load. <u>Except in Emergency heating mode, the supplementary electric-resistance heat may not energize unless the outdoor temperature is below 40°F.</u></p>	Elaine Powers, Ryan Taylor and Mike Barcik	A
75)	2015 IECC Appendix RC	<u>Add new Appendix RC, 'AIR BARRIER AND INSULATION INSTALLATION COMPONENT GUIDE'. Please see the handouts.</u>	Mike Barcik, Southface, Representing (GEFA)	R
76)	2015 IECC Appendix RD	<u>Add new Appendix RD, 'SAMPLE COMPLIANCE CERTIFICATE'. Please see the handouts.</u>	Lauren Westmoreland, Representing (SEEA)	R